YEVDOKIMOV, E.S., veterinarnyy vrach; TOLSTOV, Yu.I., inzh.; OSTANIN, V.S., inzh.

Simplified rotary single-stage shaking machine for the production of liquid forms of antibiotics. Veterinariia 38 no.10:75-76 O '61. (MIRA 16:2)

1. Turkmenskaya respublikanskaya veterinarno-bakteriologicheskaya laboratoriya (for Yevdokimov). 2. Turkmenskiy nauchno-issledovatel'skiy institut zemledeliya (for Tolstov, Ostanin).
(Antibiotics)

TOLSTOV, Yu.P.

Foreign body of the esophagus (open safety pin) in a three-year-old child. Vest. oto-rin. 19 no.1:106 Ja-F '57 (MLRA 10:4)

1. Iz kliniki bolezney ukha, gorla i nosa (zav.-prof. A.O. Shul'ga) Chkalovskogo meditsinskogo instituta.
(ESOPHAGUS--FOREIGN BODIES)

TOLSTOV, Yu.P., assistent

Pathomorphological changes in the aural labyrinth in animals in brucellosis. Zhur. ush., nos. i gorl. bol. 20 no.1:36-43 Ja-F '60.
(MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. A.O.Shul'ga) Orenburgskogo meditsinskogo instituta.
(LABYRINTH (EAR)--DISEASES) (BRUCELLOSIS)

TOLSTOV, Yu.P.

Method for silver impregnation of the neural elements of the inner ear. Vest.otorin. no.5:73-75 '62. (MIRA 15:9)

1. Iz kafedry bolezney ukha, nosa i gorla (zav. - prof. A.O. Shul'ga) Orenburgskogo meditsinskogo instituta.
(EAR--INNERVATION) (STAINS AND STAINING (MICROSCOPY))

TOLSTOV, Yu.P.

Suppurative affection of the right temporo-occipital bone of the right middle ear caused by umbilical sepsis in a 20-day old child. Vest. otorin. 22 no.1:83-84 Ja-F '60. (MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. kafedroy - prof. A.O.Shul'ga) Orenburgskogo meditsinskogo instituta.
(EAR--DISEASES)

TOLSTOV, Yu.P.

Changes in hearing an the vestibular function in brucellosis. Vop. otorin. 21 no.6:24-29 N-D '59. (MIRA 13:4)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. A.O. Shul'ga) Orenburgskogo meditsinskogo instituta.
(BRUCELLOSIS, pathology)
(VESTIBULAR APPARATUS, pathology)
(DEAFNESS, etiology)

TOLSTOV, Yu.P.

Cases of infectious psychoses. Vest.oto-rin. 18 no.5:102-103 S-O '56.
(MLRA 9:11)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. A.O.Shul'ga) Chkalovskogo meditsinskogo instituta
(PSYCHOSES, etiol. and pathogen.
infect.)
(INFECTION, compl.
psychoses)

TOLSTOV-ATNARSKIY, V.G. (selo Khodary Chuvashskoy ASSR)

Five years of activity of a regional study group. Geog.v shkole 19 no.4:56-57 Jl-Ag '56. (MIRA 9:10)
(Natural history--Study and teaching)

TOLSTOVA, A.I., inzhener-metodist; Bol'shakov, A.A.; Kol'tsov, B.F.

From practices of industrial innovation. Tekst.prom. 19 no.4:70-74 Ap '59. (MIRA 12:6)

1. Tashkentskiy khlopchatobumazhnyy kombinat (for Tolstova).
(Cotton manufacture) (Efficiency, Industrial)

TOLSTOVA, E. L.

√ Comparative evaluation of some narcotic substances used in the narcosis of foxes and polar foxes. E. L. Tolstova. *Trudy Moskov. Pushno-Mekhovogo Inst.* 4, 27-34(1953); *Referat. Zhur., Khim.* 1954, No. 43353. M. Hosch

TUROVETS, I.G., prof. (Kiyev, ul. Engel'sa, d.26, kv.8); TOLSTOVA, G.M.,
kand.med.nauk

Potentiated anesthesia in surgery. Nov.khir.arkh. no.1:
54-63 Ja-F '59. (MIRA 12:6)

1. Kafedra khirurgii (zav. - prof.I.G.Turovets) sanitarno-gigiyenicheskogo fakul'teta Kiyevskogo meditsinskogo instituta.
(ANESTHESIA)

TUROVETS, I.G., prof. (Kiyev, ul.Chkalova,d.37a,kv.12); TOLSTOVA, G.M.;
BOGOMOLETS, I.S., dotsent

Anesthesia methods in operations for diseases of the biliary tract.
Klin.khir. no.7:53-58 Jl '62. (MIRA 15:9)

1. Kafedra khirurgii (zav. - prof. I.G.Turovets) sanitarno-gigiyenicheskogo fakul'teta Kiyevskogo meditsinskogo instituta.
(BILIARY TRACT—SURGERY) (ANESTHESIA)

TOLSTOVA, Galina Mikhaylovna; AVERBAKH, M.M., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Electrosurgical method in treating breast cancer] Elektrokhirurgicheskii metod lecheniia raka molochnoi zhelezy. Moskva, Gos. izd-vo med.lit-ry, 1959. 114 p. (MIRA 13:4)
(BREAST--CANCER) (ELECTROSURGERY)

TOLSTOVA, G. M.

"A Comparative Evaluation of Remote Results of Treating Patients Suffering From Cancer of the Breast by Electrosurgery and by Ordinary Surgical Methods", Vrachebnoye Delo, No 6, 1953, pp 491-496.

(No abstract given) SO: Sum. No. 443, 5 Apr. 55

TOLSTOVA, G.M.

TOLSTOVA, G.M.

Comparative study of the healing of electrosurgical and scalpel wounds from operations for cancer of the mammary gland. Medych. zhur. 23 no.4:82-85 '53. (MLRA 8:2)

1. Institut onkologii Akademii medichnikh nauk URSR, khirurgichniy viddil.

(ELECTROSURGERY) (MAMMARY GLANDS--SURGERY) (WOUNDS)

YANKE, Ye.; EMDE, F.; SEDOV, L.I. [translator]; TOLSTOVA, G.V. [translator];
BRONSHTEYN, I.N., red.; GAVRILOV, S.S., tekhn.red.

[Tables of functions with formulas and curves] Tablitsy funktsii s formulami i krivymi. Izd.3. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1959. 420 p. Translated from the German. (MIRA 13:3)
(Functions)

TOLSTOVA, I.I.; RUDENSKAYA, I.N.

Effect of choline chloride on some indices of fat metabolism in Botkin's disease in children. Vop. okh. mat. i det. 8 no.7: 48-51 Jl '63. (MIRA 17:2)

1. Iz biokhimicheskogo otdela (zav.- doktor med. nauk N.Ye. Ozeretskovskaya) i infektsionnogo otdela (zav.- prof. B.G. Shirvindt) Nauchno-issledovatel'skogo pediatricheskogo instituta (direktor - kand. med. nauk V.P. Spirina) Ministerstva zdravookhraneniya RSFSR.

ONISHCHENKO, I.I.; TOLSTOVA, L.G.

Concerning the book "Materials and parts for constructing mining enterprises." Shakht. stroi. 7 no.10:32 O '63. (MIRA 16:10)

1. Glavnyy inzh. tresta Aglostroy, Krivoy Rog (for Onishchenko).
2. Direktor Krivorozhskogo filiala Yuzhnogo nauchno-issledovatel'skogo instituta promyshlennosto stroitel'stva (for Tolstova).

TOLSTOVA, L. S.

"Puti etnicheskogo razvitiya karakalpakov, prozhivayushchikh za predelami Khorezmskogo oazisa."

report submitted for 7th Intl Cong, Anthropological & Ethno/lo/gical Sciences Moscow, 3-10 Aug 64

BELOSHAPKO, P.A., prof. [deceased]; MARTYNSHIN, M.Ya.; DYUZHIKOVA, V.M.;
IGNATOVA, V.D.; POTSELUYEVA, S.I.; TOLSTOVA, M.I.

[illegible]

Features of the course and management of labor in breech presentation. Akush.i gin. 36 no.5:28-34 S-O '60. (MIRA 13:11)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korrespondent AMN SSSR prof. P.A. Beloshapko [deceased]) AMN SSSR.
(LABOR (OBSTETRICS))

BELOSHAPKO, P.A., prof. [deceased]; MARTYNSHIN, M.Ya.; DYUZHINOVA, V.M.;
IGNATOVA, V.D.; POTSELUYEVA, S.I.; TOLSTOVA, M.I.

Features of the course and management of labor in breech presentation. Akush.i gin. 36 no.5:28-34 S-O '60.
(MIRA 13:11)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korrespondent AMN SSSR prof. P.A. Beloshapko [deceased]) AMN SSSR.
(LABOR (OBSTETRICS))

GLOTSER, L.M., kandidat tekhnicheskikh nauk; TOLSTOVA, R.A., inzhener.

Efficient use of half-woolen waste. Leg.prom. 15 [i.e. 16] no.6:
34-35 Je '56. (MLRA 9:8)
(Felt)

TOLSTOVA, T.I.

Effect of small presidon doses on neurotics. Trudy Inst. fiziol. 7:260-266 '58. (MIRA 12:3)

1. Sektor nevrozov i organicheskikh zabolevaniy nervnoy sistemy (zav. - N.A. Kryshova). Instituta fiziologii im. I. P. Pavlova AN SSSR.

(PYRIDINEDIONES) (NEUROSES)

GORLANOVA, T.T.; DMITRIYEVA, A.F.; ZHILINSKAYA, M.A.; KRYSHOVA, N.A.; PERVOV,
L.G.; TOLSTOVA, T.I.

Clinical and physiological data on some forms of internal inhibition in neurasthenics and hysteriacs. Trudy Inst. fiziol. 7:72-77 '58.
(MIRA 12:3)

1. Sektor nevrozov i organicheskikh zabolevaniy nervnoy sistemy (zav. - N.A. Kryshova) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(NEUROSES) (INHIBITION)

GREBENNIK, L.I.; TOLSTOVA, T.I.

Conversion of phthivazid and tubazid (INH) in the organism. Farm.i toks. 24 no.1:114-118 Ja-F '61. (MIRA 14:5)

1. Otdel khimioterapii (zav. - prof. G.N.Pershin) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S.Ordzhonikidze.

(ISONICOTINIC ACID)

TOLSTOVA, T. I.

TOLSTOVA, T. I. "The Effect of Small Doses of Soporifics on the the Higher Nervous Activity of Neurotic Patients." Acad Sci USSR. Inst of Physiology imeni I. P. Pavlov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 19, 1956.

KOGAN, V.B.; TOLSTOVA, T.S.

Separation of mixtures of the higher alcohols and hydrocarbons by the extraction method. Zhur.prikl.khim. 35 no.10:2333-2335 O '62. (MIRA 15:12)
(Alcohols) (Hydrocarbons) (Extraction(Chemistry))

L 8080-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c)/ETC(m) RPL DS/WW/RM

ACC NR: AP6000010 SOURCE CODE: UR/0080/65/038/011/2617/2618

44,55 44,55 44,55

AUTHOR: Tolstova, T. S.; Kogan, V. B.; Skorokhodova, V. L.

43

B

ORG: none

7 7, 44,55

TITLE: Liquid-vapor equilibrium in nitrobenzene-nitromethane and nitrobenzene-nitroethane systems

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 11, 1965, 2617-2618

TOPIC TAGS: nitromethane, nitroethane, nitrobenzene, physical chemistry property, liquid vapor equilibrium, fluid property, CHEMICAL EQUILIBRIUM

ABSTRACT: This paper presents for the first time data on liquid-vapor equilibrium 7 in systems consisting of nitrocompounds: nitromethane (10—90 mol%)-nitrobenzene, and nitroethane (10--90 mol%)-nitrobenzene. It was found that the activity coefficients for nitromethane and nitroethane are approximately equal in mixtures of analogous composition: 1.259—1.023 and 1.24—1.014, respectively. Orig. art. has: 4 tables. [illegible]

SUB CODE: 07 / SUBM DATE: 15Nov63/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: 4146

Card 1/1 UDC: 541.127

SOV/76-33-2-6/45

5(4)

AUTHORS: Kogan, V. B., Tolstova, T. S.

TITLE: Properties of Tricomponent Azeotropic Mixtures of Components With Limited Mutual Solubility II (O svoystvakh trekhkomponentnykh azeotropnykh smesey, obrazovannykh komponentami s ogranichennoy vzaimnoy rastvorimost'yu. II)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, pp 276 - 278 (USSR)

ABSTRACT: In work reported in a previous paper (Ref 1) it was found that in regard to these particular mixtures the relative content of each component with poorer mutual solubility must be greater than in the case of binary azeotropic mixtures. Since another paper (Ref 2) gave data which were not in agreement with this observation the authors investigated the following systems: alcohol - water - trichloroethylene; allyl alcohol - water - hexane; isopropanol - water-nitromethane; and hexyl alcohol - water - benzene. The experiments utilized a column with an efficiency of 45 theoretical plates. The composition of the binary azeotropes propanol-water and propanol-trichloroethylene was determined

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Properties of Tricomponent Azeotropic Mixtures of Components With Limited Mutual Solubility II SOV/76-33-2-6/45

from the refractive index obtained using a IRF-22 refractometer. The experimental results obtained (Tables 2,3) show that the data given in reference 2 are incorrect and that the principle mentioned above holds also for the systems investigated here. In doing so the possibility of applying the relationship between the composition of binary and ternary azeotropic mixtures to the testing of experimental data was reconfirmed. There are 3 tables and 4 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii Leningrad (State Institute of Applied Chemistry, Leningrad)

SUBMITTED: June 25, 1957

Card 2/2

LIVSHITS, B.G.; NOVIKOV, V.Yu.; TOLSTOVA, T.Yu.

Determining the surface energy of grains in transformer steel of various purity. Fiz. met. i metalloved. 18 no.4:580-583 O '64. (MIRA 18:4)

1. Moskovskiy institut stali i splavov.

TOLSTOVA, Yu.S.

Insects living on the stems of the raspberry (Rubus idaeus L.) ~~in~~ the suburban areas of Leningrad. Ent. oboz. 41 no.2:285-293 '62. (MIRA 15:11)

1. Kafedra obshchey entomologii Leningradskogo sel'skokhozyaystvennogo instituta, g. Pushkin.
(Leningrad--Raspberries--Diseases and pests)
(Leningrad region--Insects, injurious and beneficial)

TOLSTOVA, Yu.S.

Ecologic characteristics of saw flies of the subfamily Cladinae injurious to raspberries and strawberries. Vop. ekol. 7:182-183 '62. (MIRA 16:5)

1. Sel'skokhozyaystvennyy institut, Leningrad.
(Leningrad Province--Sawflies)
(Leningrad Province--Berries--Diseases and pests)

TOLSTOV-ATNARSKIY, V.G.

Expedition along the river Sura. Geog. v shkole no.2:63-64 Mr-Ap '53.
(MLRA 6:5)
(Sura Valley--Description and travel)

TOLSTOVA-PARIYSKAYA, N. G. (Professor), SHCHEGLOV, A. M. (Assistant Professor),
KRASNIKOV, (Candidate Of Veterinary Sciences).

"Pathological Anatomy and Several Questions on the Pathogenesis of Atrophic Rhinitis in Swine."

Veterinariya, Vol. 38, No. 1, p. 30, 1961.

TOLSTOVA-PARIYSKAYA, [illegible]

TOLSTOVA-PARIYSKAYA (Professor, Doctor, President of the Veterinaro-zootechnical Section). The third intercollegiate scientific conference of the Belotserkovsk Agricultural Institute.

So: Veterinariya; 24; 9; September 1947; Uncl.
TABCON

TOLSTOVA-PARIYSKAYA, N.G., prof.; SHCHEGLOV, A.M., dotsent; KRASNIKOV, G.A., kand.veterinarnykh nauk

Pathological anatomy and some problems in the pathogenesis of infectious atrophic rhinitis in swine. Veterinariia 38 no.1:33-38 Ja '61. (MIRA 15:4)

(Swine—Diseases and pests) (Nose—Diseases)

TOLSTOVA-PARIYSKAYA, N. G.

PA 22/49T67

USSR/Medicine -- Societies, Medical Sep 48
Medicine -- Literature, Medical

"Fourth Intercollegiate Conference of the Belotserkovka Agricultural Academy," N. G. Tolstova-Pariyskaya, 2 pp

"Veterinariya" No 9

Summarizes papers read at Conference.

[redacted]

22/49T67

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

TOLSTOY, A.

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

COMMON VARIABLES INDEX

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B

32

Value of Dark Conductivity as a Criterion of Stationary and Relaxation Properties of Photoconductivity. (In Russian.) D. B. Gurevich and A. Tolstoi. *Doklady Akademii Nauk SSSR* (Reports of the Academy of Sciences of the USSR), new ser., v. 72, May 21, 1950, p. 473-476.

Proposes determination of the type of photoresistance of semiconductors (exponential or hyperbolic) on the basis of determination of their dark conductivity. Theoretical bases are indicated; and the method is described.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

15-57-4-4600

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4, p 87 (USSR)

AUTHOR: Tolstoy, A. I.

TITLE: Some Peculiarities in the Optical Properties of the Muscovites From the Mama-Vitim Deposit (O nekotorykh osobennostyakh opticheskikh svoystv muskovitov Mamsko-Vitimskogo mestorozhdeniya)

PERIODICAL: Tr. Vses. n.-i. in-ta asbesta, slyudy, asbestotsement. izdeliy i proyektir. str-va predpriyatiy slyud. prom-sti, 1956, Nr 5, pp 22-33.

ABSTRACT: The author presents the results of studies on several optical properties of muscovites from Mama. Mass measurements led to the recognition of definite limits of 2V for different genetic varieties of muscovite. It was discovered that muscovite with a 2V of 33° to 36° is associated with coarse segregations of quartz that occur near xenoliths of gneiss in the selvages of pegmatite veins. The muscovite that develops with biotite and the

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15-57-4-4600

Some Peculiarities in the Optical Properties (Cont.)

muscovite that is found in association with quartz are characterized by values of 2V from 36°30' to 39°30' to 42°. In the inhomogeneous gross composition of the pegmatite veins, the 2V of muscovite in crystals from districts that are fundamentally of microcline composition may be 5° greater than in crystals from veins consisting essentially of plagioclase. Distinct interrelations have been established among the optical properties. An increase in 2V is accompanied by a decrease in dispersion and absorption, i.e., color is increased. An increase in 2V of 1° corresponds to a decrease in dispersion, on the average, of 10. A distinct color in muscovite is generally associated with Fe, Ti, and Mn. With an increase in MgO, FeO, and TiO_2, the colors increase from red-brown to greenish-yellow. At the same time the content of Al_2O_3, CaO, and SiO_2 increases. Mn shows no marked influence on the color of muscovite. An increase in 2V, which is accompanied by a decrease in the dispersion of the optic axes, varies inversely as the TiO_2 and MgO content and directly as the CaO and SiO_2 content. The optical properties and composition of the muscovite change markedly within a single crystal and even within a single growth zone on a face. Similarly disposed crystals, found

Card 2/3

Some Peculiarities in the Optical Properties (Cont.) 15-57-4-4600

under uniform geological conditions, differ in their properties. In zoned crystals of muscovite that have clear growth zones of irregular color, and also in adjacent crystals differing sharply among themselves in shape, color, and geological relations, a considerable variation in optical properties and composition is observed. Crystals from different pegmatite bodies, similar in color, shape, and geological position, also possess similar optical properties.

Card 3/3

G. A. G.

PHASE I BOOK EXPLOITATION SOV/5333

Pchelintseva, G. M., ed.

Uskoriteli; sbornik statey (Accelerators; Collection of Articles) Moscow, Atomizdat, 1960. 121 p. Errata slip inserted. 5,000 copies printed.

Scientific Ed.: B.N. Yablokov; Ed.: G.M. Pchelintseva; Tech. Ed.: N.A. Vlasova.

PURPOSE: This collection of articles is intended for scientists and engineers engaged in the construction and operation of particle accelerators.

COVERAGE: These original articles treat specific problems arising in the operation of present-day accelerators, particularly linear electron accelerators. A new accelerator put into operation at the Ukrainskiy fiziko-tekhnicheskiy institut (Ukrainian Physicotechnical Institute) is described, and problems in the dynamics of particles in linear electron accelerators are discussed. New methods are discussed for the extraction of particles from accelerators. Problems associated with the shaping of permanent magnetic fields and the acceleration of multicharge ions are also treated. The changeover of the series cyclotron to the phasotron acceleration mode with a view to increasing the energy of accelerated particles is described, and some problems connected with the bunching of particles are elaborated. No personalities are mentioned. References accompany each article.

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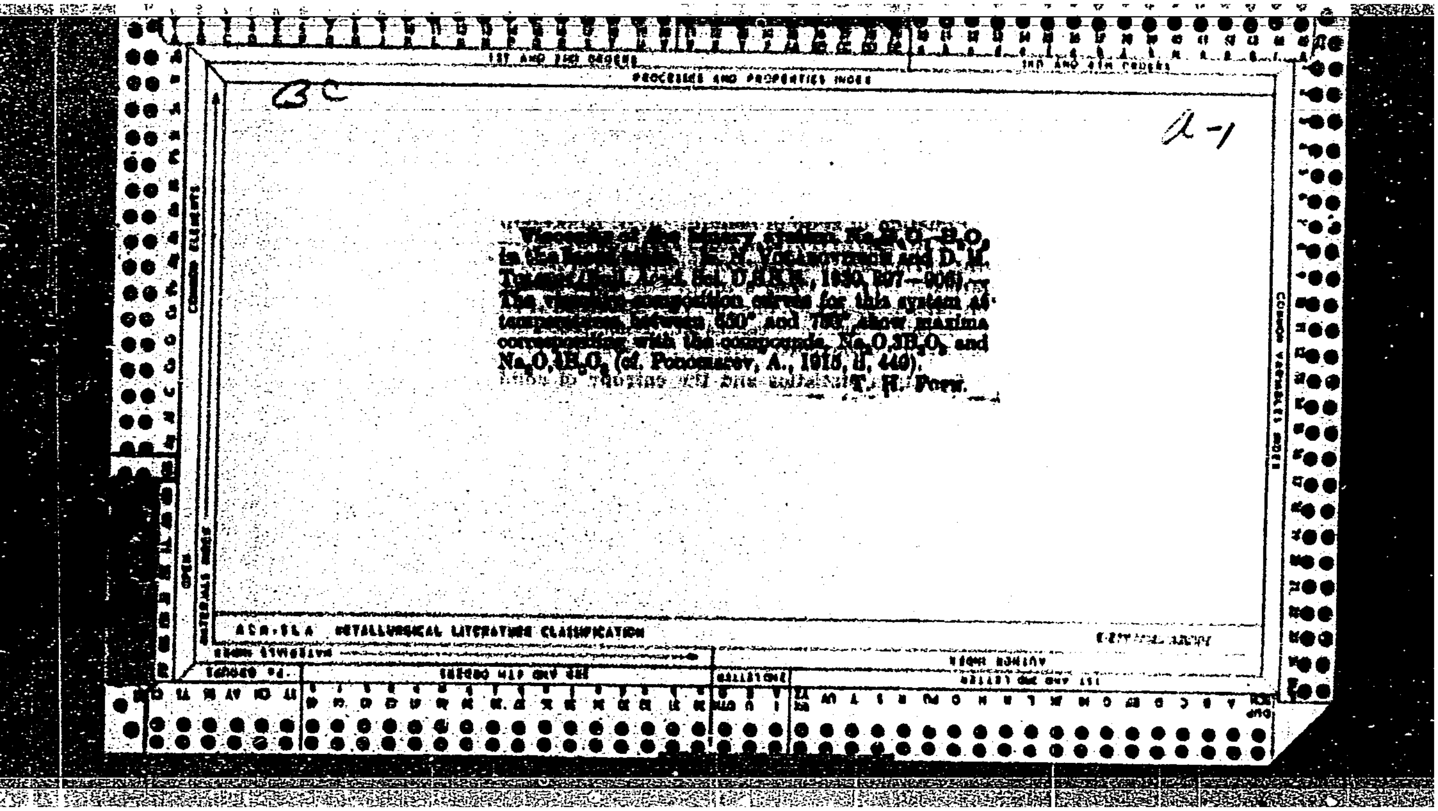


1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

2-1

Viscosity of the binary system, Na$_2$B$_4$O$_7$–B$_2$O$_3$, in the [illegible] S. [illegible] Voskresenskii and D. M. T[illegible] (Bull. Acad. Sci. U.R.S.S., 1930, 897—906). The [illegible] curves for this system at temperatures between 650° and 750° show maxima corresponding with the compounds Na$_2$O,3B$_2$O$_3$ and Na$_2$O,4B$_2$O$_3$ (cf. Ponomarev, A., 1915, ii, 440).

T. H. Pope.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES

MA

2

Viscosity of the binary system: $NaPO_3$–$NaBO_2$ in the molten state. M. P. Volarovich and D. M. Tolstoi. *Compt. rend. acad. sci. U. R. S. S.* 1932A, 269-72; cf. *C. A.* 25, 3880.—A continuation of previous work. The rotating-cylinder method was used. Results of investigation of the system $NaPO_3$–$NaBO_2$ do not justify a definite conclusion about parallelism between viscosity and fusion-point curves. A mixt. contg. 38% $NaBO_2$ by wt. behaves like a supercooled liquid and the viscosity rises rapidly with temp. The 62% $NaBO_2$ mixt. showed an abnormal viscosity, characteristic of colloidal solns., suspensions and emulsions. S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

R

Volarovich, M. P., and Tolstoi, D. M. DETERMINATION OF THE PLASTIC FLOW CONSTANTS OF MINERAL SUSPENSIONS. *J. Phys. Chem.* (U.S.S.R.), 4 [6] 815-31 (1933); *Kolloid-Z.*, 70, 165-74 (1935).—A new design of a rotating-cylinder apparatus was applied to the measurement of the plastic flow constants of aqueous clay suspensions. The outer cylinder containing the suspension was rotated by falling weights, while the inner cylinder, immersed in the suspension coaxially with the former, was kept stationary. Bingham's equation of plastic flow, $f - \theta = \eta \frac{dv}{dx}$, where θ is the yield value and η is a constant corresponding to the viscosity in Newton's equation, as integrated by M. Reiner and R. Riwlin for the case of coaxial cylinders, was checked and proved to hold good within the range of angular velocities which could be covered in the apparatus. Within the limits of experimental error, the values of θ and η were found to be constant for a given suspension, as tested with cylinders of various dimensions and at various angular velocities. Graphs representing the viscosity-concentration and the yield value-concentration relations were plotted for two grades of Russian clays. The character of the angular velocity-turning moment graphs was found to vary considerably for different grades of clay. At concentrations corresponding to equal yield values the more plastic the clay, the smaller was its viscosity. As a measure of plasticity the authors proposed the ratio $\frac{\theta}{\eta}$ corresponding either to equal concentrations of clay or to concentrations with equal yield values.

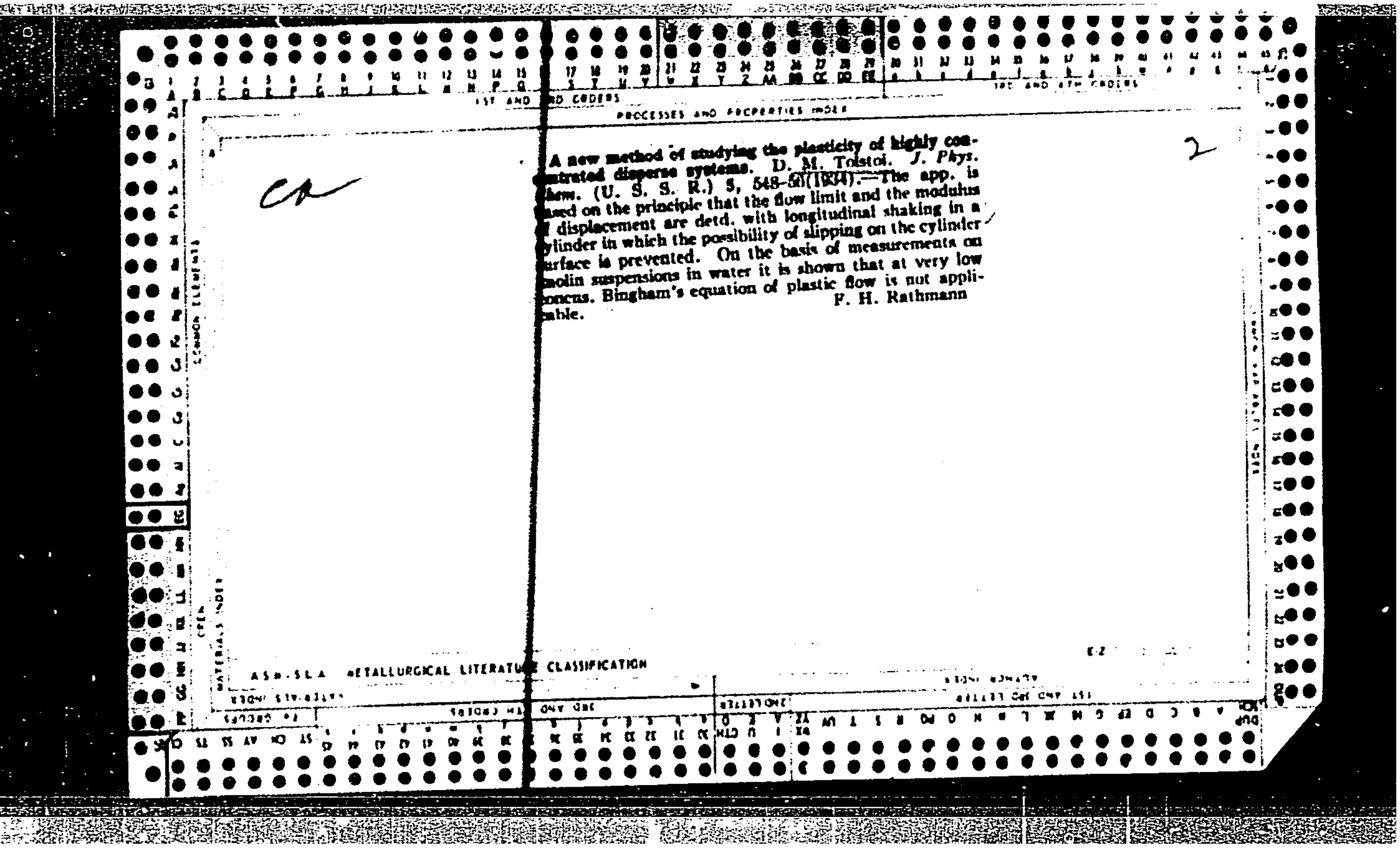
PROCESSES AND PROPERTIES INDEX

Ca

The effect of temperature and electrolytes on the plastic properties of kaolin. M. P. Volarovich and D. M. Tolstoi. *Compt. rend. acad. sci. U. R. S. S.* [N. S.], 1, 557-60 (in French 560)(1934).—By the concentric-cylinder method, aq. solns. of kaolin were studied to det. the effect of temp. and of the addn. of electrolytes on the consts. θ and η of Bingham's equation. From 10° to 57° the const. θ is independent of temp., while η decreases with increasing temp. slightly less rapidly than the viscosity of H_2O. NaOH lowers the two consts. considerably, while NaCl causes a slight diminution of θ and a decided increase of η. The plasticity, θ/η, decreases in both cases.

M. McMahon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

2

A new method of studying the plasticity of highly con-
ntrated disperse systems. D. M. Tolstoi. *J. Phys.*
hem. (U. S. S. R.) 5, 548-50(1934).—The app. is
ased on the principle that the flow limit and the modulus
displacement are detd. with longitudinal shaking in a
ylinder in which the possibility of slipping on the cylinder
urface is prevented. On the basis of measurements on
aolin suspensions in water it is shown that at very low
oncns. Bingham's equation of plastic flow is not appli-
able.
F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

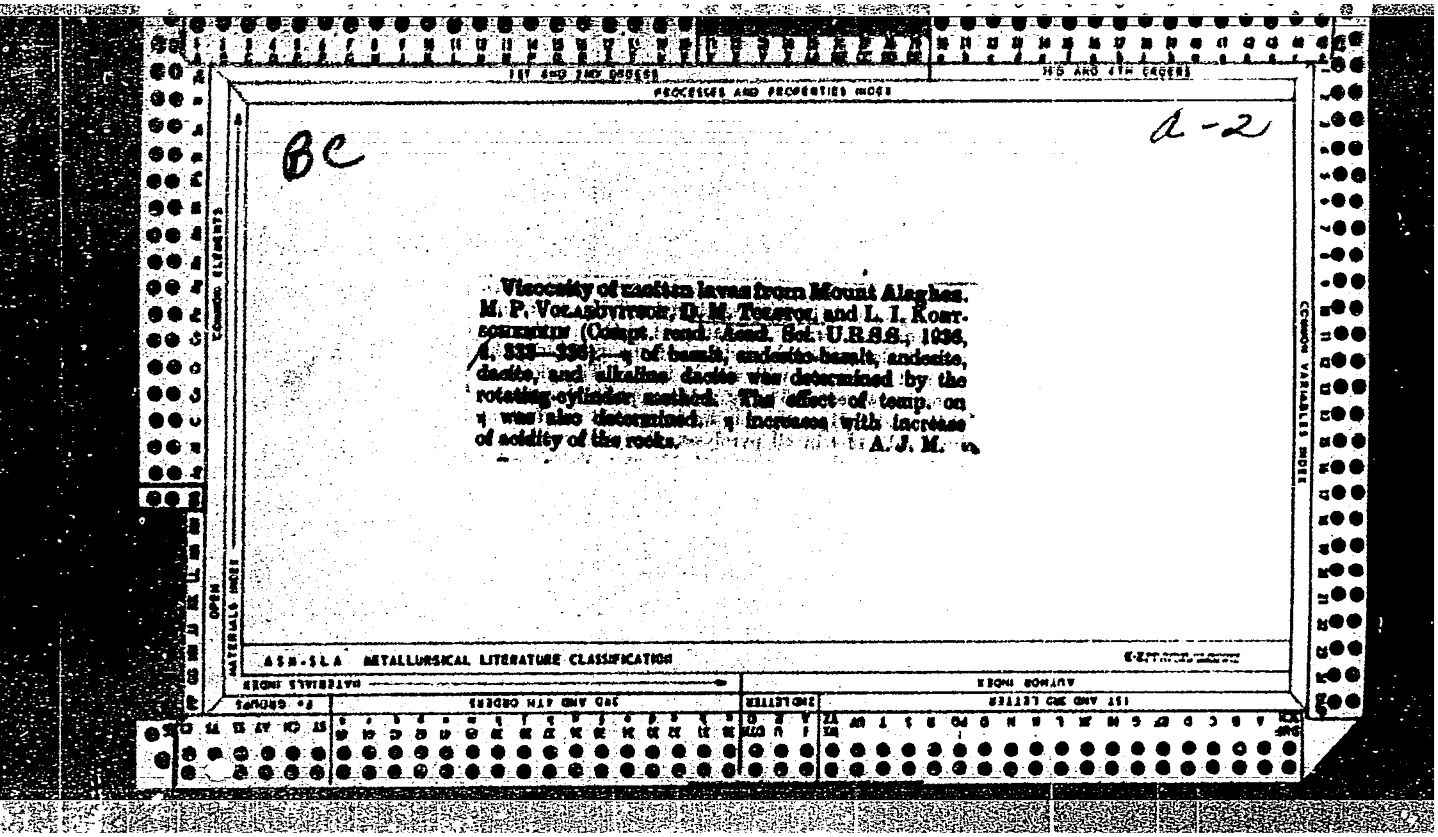
PROCESSES AND PROPERTIES INDEX

1a

2

The viscosity and plasticity of disperse systems. I. Determination of the constants of plastic flow of clay suspensions. M. P. Volarovich and D. M. Tolstoi. *Kolloid-Z.* 70, 165-74(1935).—The coaxial cylinder app. (cf. *C. A.* 27, 4995; 28, 4067^9) was used to det. the const. of Bingham's equation for plastic flow for concd. clay suspensions. The equation is obeyed within the limits of accuracy. Arthur Fleischer

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

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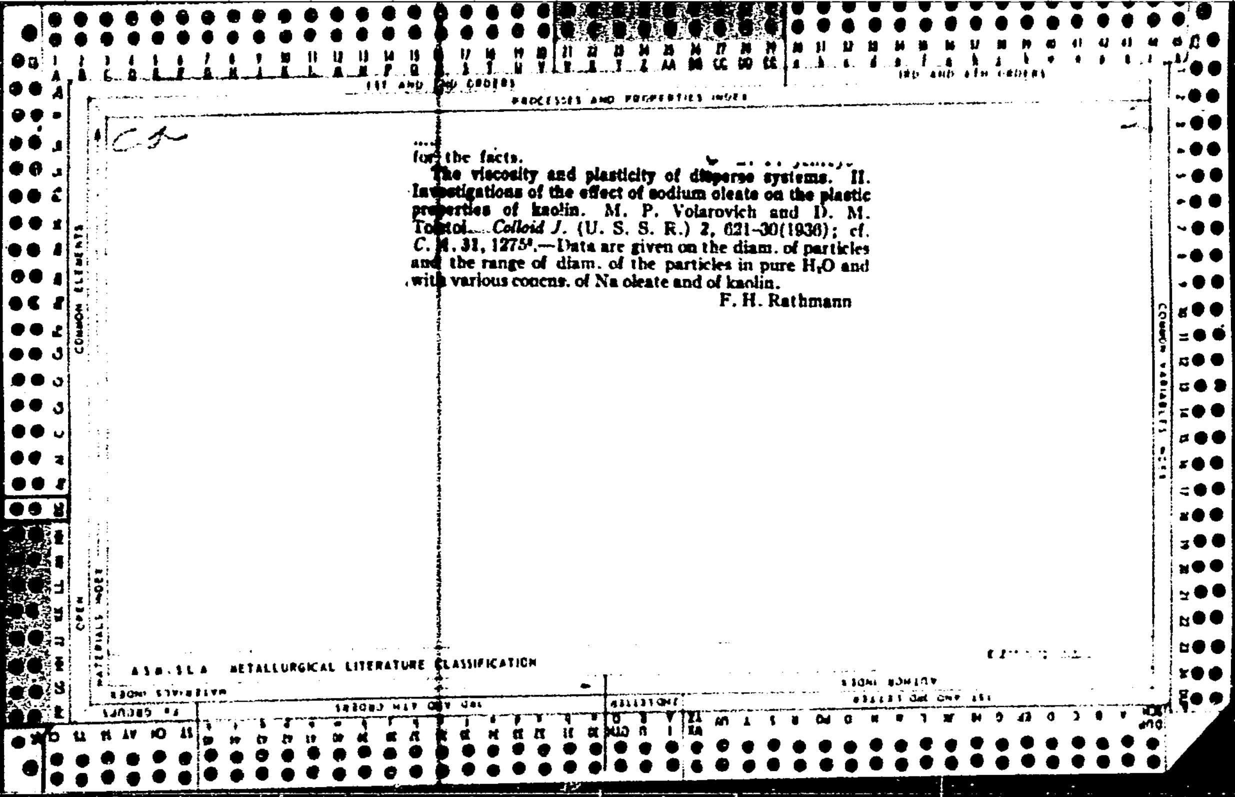
BC

a-2

Viscosity of molten lavas from Mount Alaghez. M. P. VOLAROVITSCH, D. M. TOLSTOI, and L. I. KORCHEMKIN (Compt. rend. Acad. Sci. U.R.S.S., 1936, 4, 333—336).—η of basalt, andesite-basalt, andesite, dacite, and alkaline dacite was determined by the rotating-cylinder method. The effect of temp. on η was also determined. η increases with increase of acidity of the rocks. A. J. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION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COMMON VARIABLES
MATERIALS INDEX
OPEN
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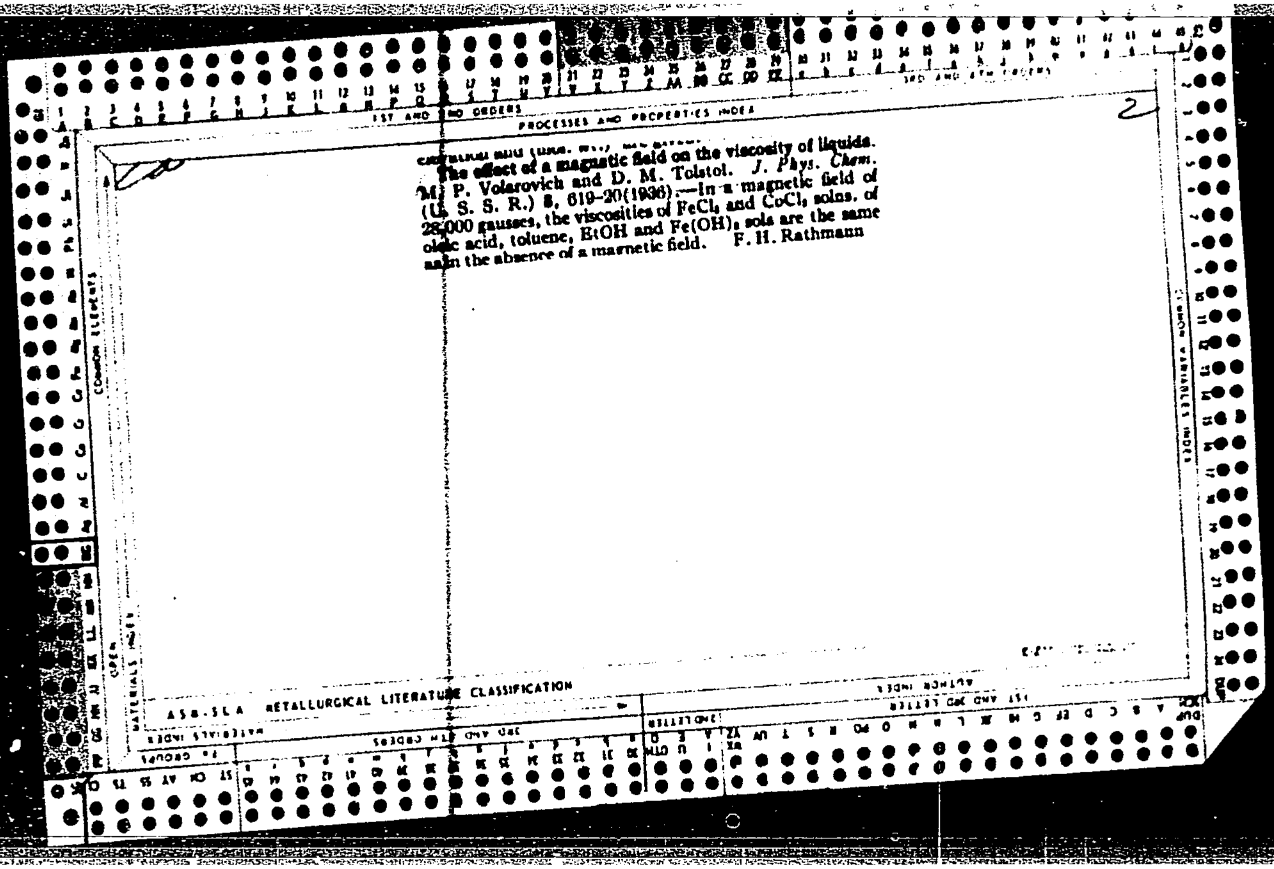
C 2

for the facts.

The viscosity and plasticity of disperse systems. II. Investigations of the effect of sodium oleate on the plastic properties of kaolin. M. P. Volarovich and D. M. Tolstoi. *Colloid J.* (U. S. S. R.) 2, 621-30(1936); cf. *C. A.* 31, 1275⁸.—Data are given on the diam. of particles and the range of diam. of the particles in pure H_2O and with various concns. of Na oleate and of kaolin.

F. H. Rathmann



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

2

[illegible]

The effect of a magnetic field on the viscosity of liquids. M. P. Volarovich and D. M. Tolstoi. J. Phys. Chem. (U. S. S. R.) 8, 619-20(1936).—In a magnetic field of 28,000 gausses, the viscosities of $FeCl_3$ and $CoCl_2$ solns. of oleic acid, toluene, EtOH and $Fe(OH)_3$ sols are the same as in the absence of a magnetic field. F. H. Rathmann

COMMON ELEMENTS

OPEN

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2ND LETTER

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1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES INDEX

N/

2

Study of the external friction and adhesion of soap. M.
5 P. Volarovich, D. M. Tolstoi and A. K. Pukhlyanko. *Colloid J.* (U. S. S. R.) 3, 621-4(1937).—The normal forces of friction (F_F) and of adhesion (r) developed when 2 soap surfaces under pressure are rubbed against each other were [illegible]. For all of the soaps studied F_F varies linearly [illegible] and obeys the Deryagin equation (*C. A.* 28, [illegible]): $F_F = \mu(F_N + r) = \mu(F_N + P_0S)$, where μ is the coeff. of friction, S the effective con-
7 tact area of the rubbing surfaces and P_0 the sp. adhesion.

John Livak

COMMON ELEMENTS

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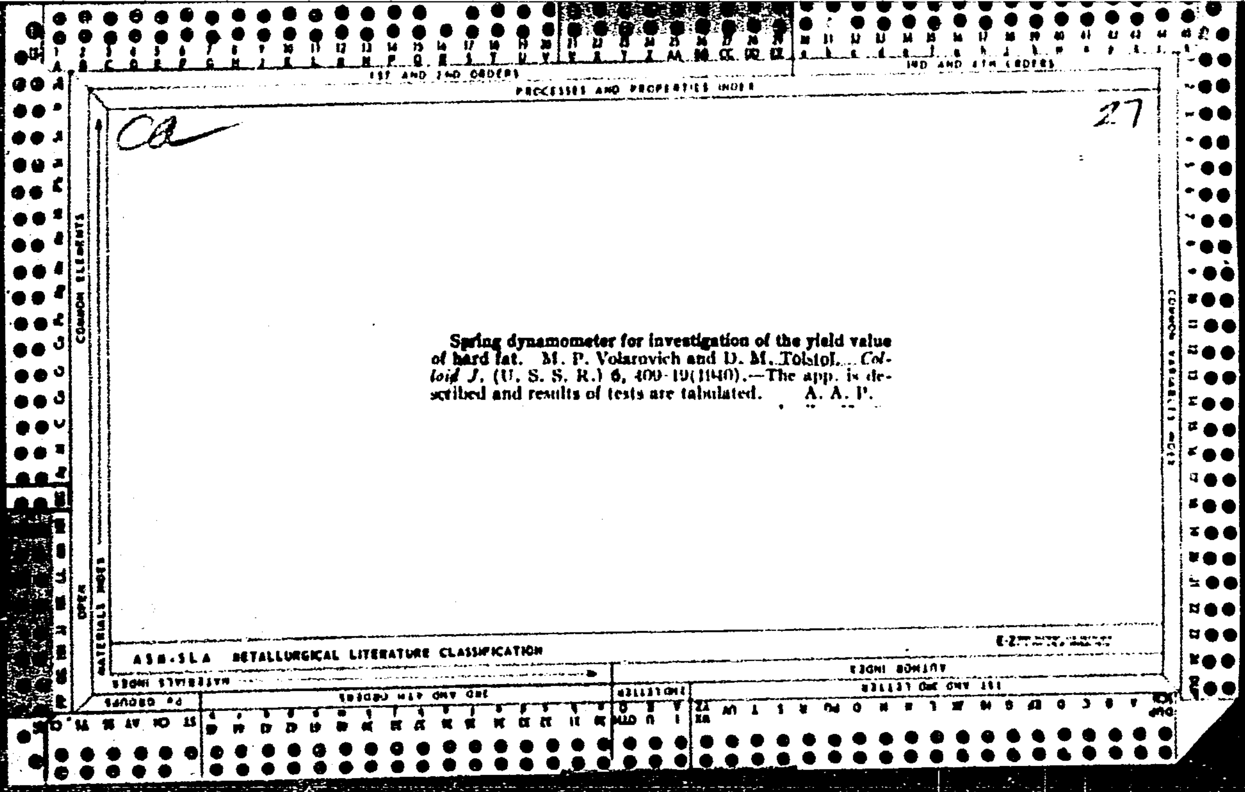
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION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OPEN
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Ca

27

Spring dynamometer for investigation of the yield value of hard fat. M. P. Volarovich and D. M. Tolstoi. *Colloid J.* (U. S. S. R.) 6, 409-19(1940).—The app. is described and results of tests are tabulated. A. A. P.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Cel

2

Sliding of disperse systems along walls. I. Origin, dimensions, and importance of the effect. D. M. Tolstoi. *Kolloid. Zhur.* 9, 450-61(1947).—When some thick suspensions are forced through a capillary, they move as "plugs" and the rise of velocity from 0 at the wall to that of the plug occurs within a peripheral film of the exuded dispersion medium. Six mechanisms of this effect are discussed, and it is calcd. for capillary and rotational viscometers. The boundary layer 10^{-4}-10^{-5} cm. thick may be sufficient for the exptl. data. The existence of peripheral films lowers the resistance of *lubricating* suspensions to tangential motion without reducing their resistance to normal stress. These films cause errors in rheological measurements on colloids. 28 references. II. Method for studying the effect and preliminary experimental results. *Ibid.* 10, 133-47(1948).—Lubricating grease was squeezed between 2 horizontal parallel plates, and the upper plate was moved tangentially by a shearing stress τ at a rate v. The function $v = f(\tau)$ was detd. for different thicknesses h (all less than 1 mm.) of the grease films. This method is convenient when $\tau < \theta_0$; θ_0 is the yield point of the bulk of the grease. For greater τ and greater h (e.g., 3 mm.) a vertical mark was made on the grease film and the plates, the upper plate was shifted for t sec. and the displacement of the mark measured. The displacement of the bottom end of the mark, on the film relative to the mark on the bottom plate is b, and b/t is v_0, the rate of sliding. The thickness h_0 of the surface layer is $v_0\eta_0/(\tau - \theta)$; η_0 and θ_0 are viscosity and yield point, resp., of the surface layer. Detn. of η_0 and θ_0 is discussed. Three kinds of grease gave 0.0025-0.27 μ for h_0 at glass and steel surfaces. The rate of movement of the upper plate was, e.g., 100 times that calcd. from the bulk viscosity and θ_0 of the grease. The difference between glass and steel surfaces was small, presumably because the nature of the solid affected h_0 and η_0 in the same direction. Surface roughness (grooved steel surfaces) increased both θ_0 and η_0. The grease having greater tendency for syneresis was a better surface *lubricant*. Surface lubrication presumably is due to "sweating out" of solvent on the surface.

J. J. Bikerman

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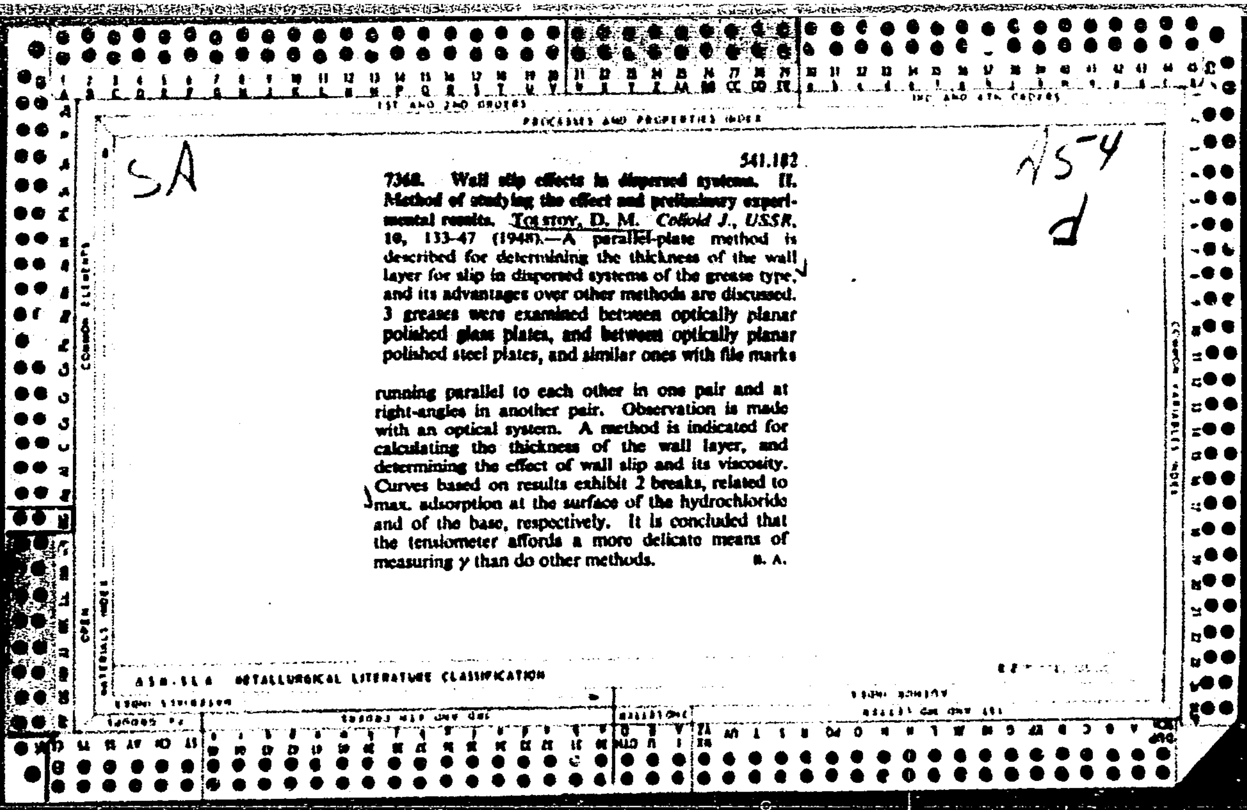
2ND AND 4TH ORDERS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SA

15-4

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541.182

7368. Wall slip effects in dispersed systems. II. Method of studying the effect and preliminary experimental results. Tolstoy, D. M. *Colloid J., USSR*, 10, 133-47 (1948).—A parallel-plate method is described for determining the thickness of the wall layer for slip in dispersed systems of the grease type, and its advantages over other methods are discussed. 3 greases were examined between optically planar polished glass plates, and between optically planar polished steel plates, and similar ones with file marks running parallel to each other in one pair and at right-angles in another pair. Observation is made with an optical system. A method is indicated for calculating the thickness of the wall layer, and determining the effect of wall slip and its viscosity. Curves based on results exhibit 2 breaks, related to max. adsorption at the surface of the hydrochloride and of the base, respectively. It is concluded that the tensiometer affords a more delicate means of measuring γ than do other methods. B. A.

PA 150T62

TOLSTOY, D. M.

21 Jul 49

USSR/Physics - Capillarity
Fluids

"Determining the Velocity Gradient as a Function of Shear Stress by the Capillary Method in the Case of 'Wall Slippage,'" D. M. Tolstoy, Moscow Mach-Instr Inst imeni I. V. Stalin, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 3 p.495-8

Generalizes Weissenberg's formula, which is used to calculate the velocity gradient as a function of shear stress for the case of "wall slippage." Submitted by Acad P. A. Rebinder 15 May 49.

150T62

C4

Determination of the yield point of structured disperse systems. D. M. Tolstoi (Lenin Lathe and Instruments Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 77, 847-50(1951).—The direct detn. of the static yield point θ defined (after Rebinder) as the least tangential shearing stress τ producing stationary flow of the creep type at the small rate of shear $dv/dx = (\tau - \theta)/\eta_1$ (where η_1 = const.), by extrapolation to $dv/dx = 0$ of the curve of dv/dx as a function of τ, becomes difficult in the case of thixotropic systems where the static yield point corresponding to the unperturbed structure can be much higher than the stress at which $dv/dx \to 0$ after disruption of the structure. As an illustration, a hydrocarbon grease in a 2 mm. thick layer between 2 plane horizontal rings of a rotating app., withstood stresses of several tens of g./sq. cm.; as soon as τ reached the magnitude corresponding to flow at const. rate, the grease became liquefied and was pressed out from between the rings under stresses of the order of 1 g./sq. cm. In this "brittle" system, beginning of stationary flow and disruption of the structure (which causes a drastic fall of θ) occur at practically the same stress, i.e. θ is very close to the strength of structure τ_m which is normally greater than θ. For such systems, θ can be detd. by measurements of the rate of flow v as a function of the force F, it being expected that disruption of the structure should manifest itself in a sharp change of the form of the function $v(F)$ under uniformly increasing load. In a conical app. excluding slippage at the wall, this expected sharp change of $v(F)$, under a definite load independent of the rate dF/dt, and equal to the θ measured between plane rings, was demonstrated for the above hydrocarbon grease and for a clay. Below the crit. F_c corresponding to θ, the rate of flow follows the empirical law $v = kF^n$, with k and n independent of dF/dt for the detn. of F_c, it is convenient to use the linear plot (log v, log F) which shows the break very distinctly. With r = radius of the base of the inner cone, h = its height, and h_c = its vertical displacement corresponding to F_c one has $\theta = F_c/2\pi r(h - h_c)$. Measurements by the method of F = const. gave agreeing results. N. Thon

[illegible]

TOLSTOY, D.M.; REBINDER, P.A.

Effect of normal load on the force of friction, in presence of mixed boundary-hydrodynamic lubrication. Dokl.AN SSSR 90 no.5:819-822 Je '53. (MLRA 6:5)

1. Moskovskiy stankoinstrumental'nyy institut im. I.V. Stalina (for Tolstoy). 2. Akademiya nauk SSSR (for Rebinder). (Friction) (Lubrication and lubricants)

[illegible]

TOLSTOY, D. M.

Physical Chemistry

Dissertation: "Sliding of Liquids and Disperse Systems on Solid Surfaces." Dr Phys-Math Sci, Inst of Physical Chemistry, Acad Sci USSR, 18 Mar 1954. (Vechernyaya Moskva, Moscow, 8 Mar 54)

SO: SUM 213, 20 Sept 1954

124-58-9-9826

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 50 (USSR)

AUTHOR: Tolstoy, D. M.

TITLE: The Sliding of Liquids and Disperse Systems on Solid Surfaces (Skol'zheniye zhidkostey i dispersnykh sistem po tverdym poverkhnostyam)

PERIODICAL: Sb., posvyashch. pamyati akad. P. P. Lazareva. Moscow, AN SSSR, 1956, pp 159-221

ABSTRACT: Presentation of the results of experimental and theoretical investigations on the sliding of liquids and colloidal dispersions on solid surfaces. The quantitative molecular theory of the effect of wall slippage of liquids is constructed on the basis of the microstrip theory of viscosity of Ya. I. Frenkel'. It is shown that a liquid is capable of slipping on a solid surface if its wetting is incomplete. There cannot be any slippage if the wetting is complete and if the work of cohesion and adhesion is equal. But, if the work of adhesion exceeds the work of cohesion, then the effect must be negative and in the limiting case a strongly attached quasi-solid layer must form. Thereupon there may be sliding of the core portion of the liquid, but only

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124-58-9-9826

The Sliding of Liquids and Disperse Systems on Solid Surfaces

with respect to said layer, if the liquid does not wet it fully. Quantitative agreement between experiment and theory has been obtained for the case of the slippage of lead on glass and water on steel rendered water-repellant with oleic acid. It is established that for lead a measurable slippage effect is obtained in capillaries having a radius $\leq 15\mu$. For water and acqueous solutions on water-repellant surfaces a slippage effect is measurable in capillaries having a radius of $\leq 0.1\mu$, only. The investigations performed indicate that the wall-slippage effect of liquids, which is entirely inconsequential in ordinary hydrodynamic calculations, assumes a substantial magnitude during the motion of a liquid in certain specific cases. In the section devoted to the sliding along a surface of colloidal dispersions, the following subjects, not clarified in previous works of the author, are examined: 1) the attainment of an initial limit of creep in the boundary layer of a colloidal dispersion; 2) the influence of a normal load on the sliding resistance; 3) the significance of the lyophylic affinity between the colloid and the liquid in which it is dispersed; 4) the action of surface-tension reducing substances on the sliding at the wall. A description is offered of an experimental method, wherein parallel plates are used, developed by the author in order to clarify the mechanism of the slippage along a wall of disperse systems and the significance of the various factors that affect it. The existence of two types of boundary-layer

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slippage of disperse systems is established: a boundary-type slippage characterized by external friction in the boundary-layer strata, and a diffused-type slippage characterized by variations in the rheological properties of the adjacent strata of the core structure. Also established is the existence of three types of systems depending on the relationship of its wall slippage from the velocity and the normal load: 1) systems in which the tangential stresses τ in the boundary layer are dependent solely on the sliding velocity; 2) systems in which the stresses τ depends solely on the normal loading; and, lastly, 3) systems in which the stresses τ are dependent on the normal loading as well as on the sliding velocity. A general equation is obtained which describes the mechanism of the shear strength of the boundary layer for all three types of dispersions examined. Bibliography: 60 references

S. V. Nerpin

1. Sliding contacts--Theory 2. Materials--Boundary layer 3. Liquids--Boundary layer 4. Boundary layer--Interference 5. Surfaces--Properties

Card 3/3

DERYAGIN, B.V.; PUSH, V.E.; TOLSTOY, D.M.

Theory of solids sliding with intermittent stops (frictional natural vibration of the first type) Zhur.tekh.fiz.26 no.6:1329-1342 Je '56. (MLRA 9:9)

1.Moskovskiy stankoinstrumental'nyy institut imeni I.V.Stalina i Institut fizicheskoy khimii AN SSSR.
(Friction) (Vibration)

20-114-6-26/54

AUTHORS: Tolstoy, D. M., Pan'Bin'-Yaao

TITLE: On the Difference Between the Forces of Static and Dynamic Friction (O skachke sily treniya pri ostanovke)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 6, pp. 1231-1234 (USSR)

ABSTRACT: The authors modified an apparatus for the investigation of the very slow gliding of dispersive systems on hard surfaces. The scheme of this modified apparatus is illustrated by a diagram. A metallic slide block rests upon three legs on a plane metal plate. The other parts are also explained with the aid of the diagram. The measurement of the instantaneous difference between the forces of the static and dynamic friction on stopping of the slide block is also described. The stopping can only be realized by a reversal of the direction of the slide block.

In all investigated cases of/the friction with boundary lubrication (also in the case of surfaces with a natural adsorption lubrication) the speed characteristics of the frictional force considerably differ from the linear dependence. At $100 > v > 15\mu$/sec the curvature of the characteristics is

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20-114-6-26/54

On the Difference Between the Forces of Static and Dynamic Friction

comparatively small, but upon further decrease of speed it increases strongly and progressively. An instantaneous jump of the frictional force is absent in all cases investigated here, i.e. for the initial value of the force of static friction applies - within limits - the error of measurement $f_0 = \lim_{v \to 0} f$. This error amounts to at most 1 % of f_0. The here examined character of the dependence f(v) complicates the problem of giving a precise definition of the theory of the friction autovibrations. The steep progressive increase of the frictional force upon reduction of the sliding speed is without doubt connected with the increase in the duration of the opposite position of the projections of the surfaces chafing each other, by which the effective total surface of the contacts is increased. By the way, the here examined character of the dependence f(v) is by no means universal for the metals. There are 2 figures and 9 references, 5 of which are Slavic.

ASSOCIATION: Moscow Machine-Tool Institute imeni I. V. Stalin (Moskovskiy stankoinstrumental'nyy institut im. I. V. Stalina)

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20-114-6-26/54

On the Difference Between the Forces of Static and Dynamic Friction

PRESENTED: February 2, 1957, by P. A. Rebinder, Member of the Academy

SUBMITTED: January 30, 1957

Card 3/3

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E075/E485

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AUTHORS: Tolstoy, D.M., Kaplan, R.L., Lin Fu-sheng,
~~Pan Pin-Yaao~~

TITLE: New experimental data on surface friction

SOURCE: Konferentsiya po poverkhnostnym silam. Moscow, 1960. Issledovaniya v oblasti poverkhnostnykh sil; sbornik dokladov na konferentsii. Moscow, Izd-vo AN SSSR, 1961. At heat of title: Akademiya nauk SSSR. Institut fizicheskoy khimii. 126-138

TEXT: This paper is a continuation of a previous work of D.M.Tolstoy and P'an Pin-Yaao (Ref.1: Dokl. AN SSSR, 1957, v.114, 1231). The aim of the present work was to obtain more data on the relationship between the dynamic and kinetic friction using a traction-force dynamometer method. An improved vibrationless apparatus is used which permits the study of kinetic surface friction either by the method of recording of the frictional oscillations or by measuring kinetic friction with the oscillations completely damped. In the experiments where the frictional oscillations were measured for the dry friction of the
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New experimental data ...

first degree, all oscillographs had see-saw shapes. The sliding surfaces investigated were steel on steel and steel on lead. The slider rested on three rigidly fixed balls (diameter 3 or 20 mm) or three curved surfaces (diameter 100 mm). The second surface was a flat metal plate. The surfaces were cleaned by fine silica gel powder (particle diameter less than 1 micron). The friction was studied for the dry surfaces and the surfaces wetted with a number of lubricants. The following conclusions have been drawn from the results obtained.
1) It was confirmed that the friction force decreases with sliding speed in the speed range of the order of microns per second and becomes constant in the speed range of tens and hundreds of microns per second. This applies to clean surfaces as well as to those covered with boundary lubricants.
2) It was established that the fall in the frictional coefficient with increasing sliding speed depends on the acceleration or deceleration of the slider. It is thought that the growth of friction force with the decreasing sliding speed is caused by the increase in the time of interaction between asperities on the sliding surfaces. This leads to a greater degree of plastic
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New experimental data ... S/643/61/000/000/007/007
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deformation of the asperities and thus increases the total area of contact. This effect increases with deceleration.
3) The coefficient of friction increases with the time during which the sliding surfaces are at rest and reaches rapidly a constant value (4 to 10 sec). The presence of lubricant lengthens this period to 80 sec. Improvements of surface finish also increase the time of attainment of the equilibrium value of the friction coefficient.
4) An increase in the load applied to the slider, other conditions being constant, facilitates the initiation of frictional oscillations, not only on account of the increase in the frictional force but also because of a widening in the area in which the frictional force decreases. This decrease favours the frictional oscillations.
5) An increase of the surface finish and cleanliness also widens the area in which the frictional force decreases with speed and increases the coefficient of friction in this area.
6) The friction coefficient depends on the orientation of the rubbing plates, the parallel orientation giving the minimum values.

X

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7) An additional factor causing the frictional oscillations is the difference between the static and kinetic friction coefficients.
8) The friction coefficients increase with the diameter of the sliding curvatures when the underlying surface is softer than that of the sliding element.
9) The lubricant not only lowers the static and kinetic friction coefficient and the difference between them but also slows down the growth of static friction force with the time of rest, which lowers the coefficient of static friction at the start of the sliding motion. Lubricating greases are especially effective in this respect.
10) It is concluded that the limiting static friction force is, in fact, the first maximum in the kinetic friction force.
11) It was found that the results obtained in this work obey the Amonton's law.
12) Preliminary results obtained for the rolling friction show that there is a marked narrowing in the area of sliding speeds in which the fractional oscillations are possible.
There are 10 figures, 2 tables and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The reference to an English language

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E075/E485

New experimental data ...

publication reads as follows: Ref.8: J. Burwell, E. Rabinowicz. J. Appl. Phys., 1953, v.24, no.2, 136.

ASSOCIATION: Moskovskiy stankoinstrumental'nyy institut
im. I.V.Stalina (Moscow Institute of Machine Tools
and Instruments imeni I.V.Stalin)

X

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TOLSTOY, D.M.

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PHASE I BOOK EXPLOITATION SOV/5590

Konferentsiya po poverkhnostnym silam. Moscow, 1960.

Issledovaniya v oblasti poverkhnostnykh sil; sbornik dokladov na konferentsii po poverkhnostnym silam, aprel' 1960 g. (Studies in the Field of Surface Forces; Collection of Reports of the Conference on Surface Forces, Held in April 1960) Moscow, Izd-vo AN SSSR, 1961. 231 p. Errata printed on the inside of back cover. 2500 copies printed.

Sponsoring Agency: Institut fizicheskoy khimii Akademii nauk SSSR.

Resp. Ed.: B. V. Deryagin, Corresponding Member, Academy of Sciences USSR; Editorial Board: N. N. Zakhavayeva, N. A. Krotova, M. M. Kusakov, S. V. Nerpin, P. S. Prokhorov, M. V. Talayev and G. I. Fuks; Ed. of Publishing House: A. L. Bankvitser; Tech. Ed.: Yu. V. Rylina.

PURPOSE: This book is intended for physical chemists.

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COVERAGE: This is a collection of 25 articles in physical chemistry on problems of surface phenomena investigated at or in association with the Laboratory of Surface Phenomena of the Institute of Physical Chemistry of the Academy of Sciences USSR. The first article provides a detailed chronological account of the Laboratory's work from the day of its establishment in 1935 to the present time. The remaining articles discuss general surface force problems, polymer adhesion, surface forces in thin liquid layers, surface phenomena in dispersed systems, and surface forces in aerosols. Names of scientists who have been or are now associated with the Laboratory of Surface Phenomena are listed with references to their past and present associations. Each article is accompanied by references.

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Tolstoy, D. M. Some Considerations on the Regularities of Friction of the First Order 113

Tolstoy, D. M., R. L. Kaplan, Lin Fu-sheng, P'an Pin-yao. New Experimental Data on External Friction 126

Deryagin, B. V., N. N. Zakhavayeva, S. V. Andreyev, A. A. Milovidov, A. M. Khomutov. Study of the Flow of Thin Layers of Polymer Solutions By the Cinematographic Method 139

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Tolstoy, D. M., Deryagin, B. V., and Push, V. E.

"Theory of Self-Excited Frictional Vibrations With Periodical Stops." p. 132

Sukhoye i granichnoye treniye. Friktsionnyye materialy (Dry and Boundary Friction. Friction Materials) Moscow, Izd-vo AN SSSR, 1960. 300 p. Errata slip inserted. 3,500 copies printed. (Series: Its: Trudy, v. [illegible])

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed.: I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: S. G. Tikhomirova.

The collection published by the Institut mashinovedeniya, AN SSSR (Institute of Science of Machines, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines, April 9-15, 1958.

S/121/61/000/001/005/009
D040/D113

AUTHOR: Tolstoy, D.M.

TITLE: New instruments for investigating frictional autovibrations

PERIODICAL: Stanki i instrument, no. 1, 1961, 22-25

TEXT: Three measuring instruments are described for measurement of machine elements motion speed fluctuations caused by friction at slow motion, and the difference in kinetic friction caused by static friction that develops during interruptions of motion. The first instrument (Fig.1), which consists of a driving dynamometer and a rotational viscous damper, is designed for determining the friction-velocity characteristic at low slip velocities. The viscous fluid was a 50% oil - 50% colophony solution. The damping factor rose by 100 times in experiments with carefully cleaned steel surfaces and high applied loads. The principle of a damper with a driving dynamometer is described in another work (Ref.7: Tolstoy, D.M., and P'an Pin-yao, "Doklady Akademii Nauk SSSR", no. 6, 1957, p 114). The new design in Fig.1 differs from that described in Ref.7 by increased force and velocity on

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account of different radii of the rotary cylinder and pulley. Reference is made to an analogous unit with an electromagnetic damper used by N.L. Kaydanovskiy at the Stankin Laboratory (Ref.6: Kaydanovskiy, N.L., "Zhurnal tekhnicheskoy fiziki", 1949, p 9) which proved inadequate for the purpose. The second instrument (Fig.2), for recording frictional autovibrations in oscillograms and determining the kinetic friction force-velocity characteristic and the static friction force increase with time, has a new type of drive. It is a "gravitation-viscosity stabilizer-motor", practically vibration-free and automatically maintaining a constant velocity. The "mover" is a weight (P). The velocity is stabilized by a rotary device (6), and the velocity may be controlled by the suspended weight, or preferably by the depth at which the inner cylinder of the device (6) is immersed in the viscous fluid which separates the inner rotary cylinder from the outer. The liquid is an oil-colophony mixture. The third instrument (Fig.3) is designed for oscillographing frictional autovibrations and determining the friction force-velocity and time characteristics. It is of rotary design and

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is fitted with an inertia-free gravitation-viscosity drive (weight and viscous fluid). The tapered shape of the rotary inner cylinder facilitates velocity control. The article includes calculations of the necessary correction values and two formulas for the calculation of measurement results from oscillograms. There are 5 figures and 9 Soviet references.

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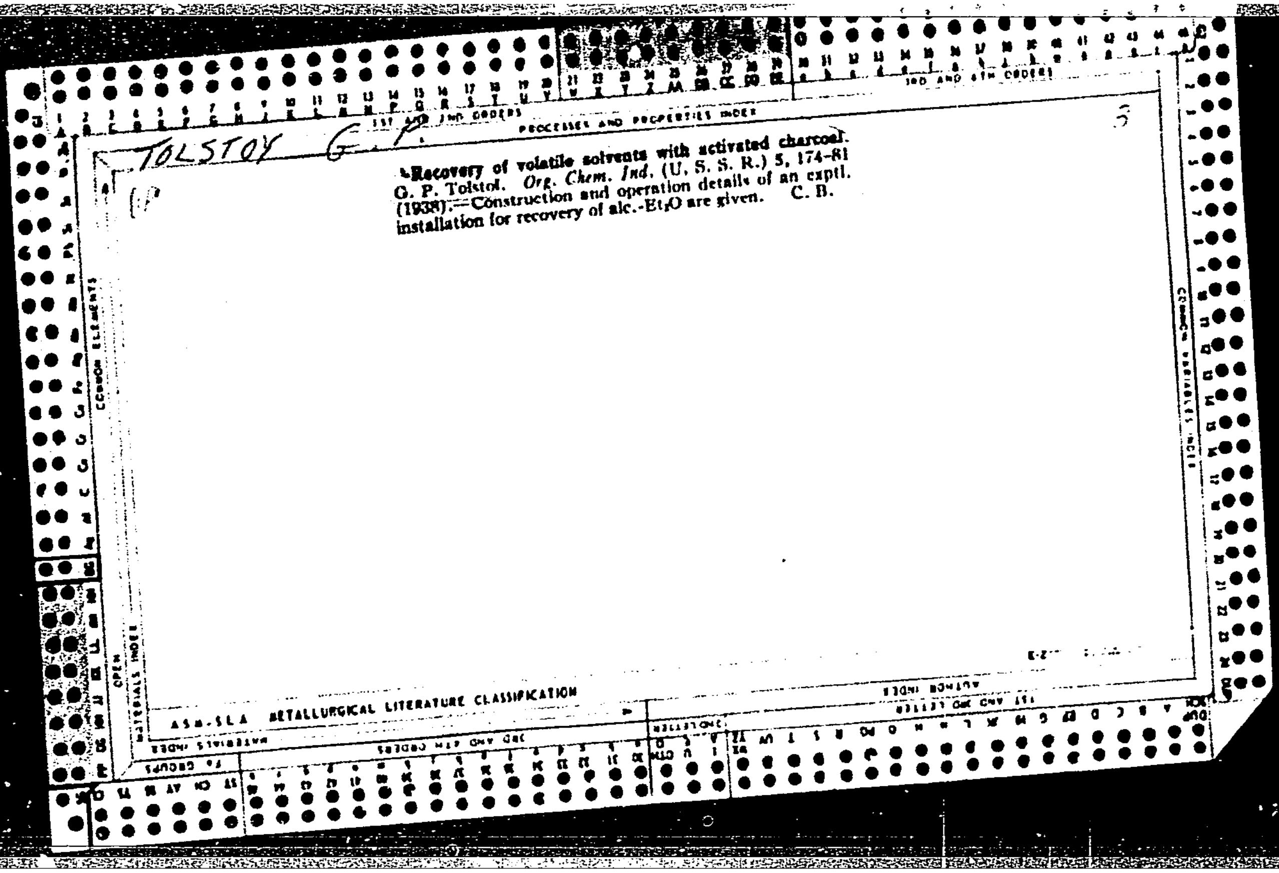
TOLSTOY, D.M.

Natural vibrations of a slider depending on the rigidity of contact and their effect on friction. Dokl. AN SSSR 153 no.4:820-823 D '63. (MIRA 17:1)

1. Moskovskiy stankoinstrumental'nyy institut. Predstavleno akademikom P.A. Rebinderom.


1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS
COMMON ELEMENTS
MATERIALS INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION
AUTHOR INDEX
1ST AND 2ND LETTER
3

TOLSTOY G. P.

Recovery of volatile solvents with activated charcoal. G. P. Tolstoi. *Org. Chem. Ind.* (U. S. S. R.) 5, 174-81 (1938).—Construction and operation details of an exptl. installation for recovery of alc.-Et_2O are given. C. B.

The use of fermenting mashes instead of yeast. G. P. Tolstoi (Alcohol Trust, Tambov, U.S.S.R.). *Spirtovaya Prom.* 21, No. 2, 31-2 [illegible]. Three schematic drawings are presented of installations in which yeast media was replaced by a fermenting-mash addn. Operation of the processing plants is described. Werner Jacobson

TOLSTOY, G. P.

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O Chastnykh Proieyodnykh. Ievyestiya Akad, Nauk SSSR, Syeriya Matyem., 1949, No 5, s. 425-26- Bibliogr: 7 Naev.

B. Gyeodyeeiya. Kartografiya. Topografiya.

So: Letopis' No. 40

1975 **TOLSTOV. G. P.**

Kurs matematicheskogo analiza. (dlya vuzov.) M., gostekhnz dat 1954. 23 sm. T. I. 552 s.s. Chert. 25,000 EKZ. 11R 40K. V Per. — (54-56954) P 517

Tolstoy, G.P.

TOLSTOY,G.P.

Use of fermenting mash instead of yeast. Spirt.prom.21 no.2:31-33 '55. (MLRA 8:10)

1. Tambovskiy spirtovyy trest
(Fermentation)

TOLSTOY, G.P.

Production of highest degree purity alcohol by periodic-action rectifiers. Spirt.prom. 20 no.3:34-35 '54. (MLRA 7:10)
(Distillation)

TOLSTOY, I., inzh.; DMITRIYEVA, I., arkhitektor

Is your city beautiful? Zhil.-kom.khoz. 12 no.7:25-26 Jl '62.
(MIRA 16:5)

1. Nauchno-issledovatel'skiy institut gradostroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Cities and towns--Civic improvement)

TOLSTOY, I., inzh.

Improvement of public areas in a resort city. Zhil.-kom. khoz. 13 no.4:18-19 Ap '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut gradostroitel'stva i rayonnoy planirovki Akademii stroitel'stva i arkhitektury SSSR.

(Yalta—City planning)

TARASOVA, Ye.A., kand. arkhitektury; TOLSTOY, I.A., kand.tekhn.nauk

Architectural problems of outdoor lighting. Gor. khoz. Mosk. 35
no.8:3-7 Ag '61. (MIRA 14:8)
(Moscow--Lighting)

TOLSTOY, I.A., kand.tekhn.nauk

Present-day requirements for outdoor public areas in the city. Gor. khoz. Mosk. 36 no.10:20-23 O '62. (MIRA 15:12)
(Moscow—City planning)

TOLSTOY, I.I.

Effective use of equipment is the most urgent objective of the national economy. Avto.dor. 25 no.12:1-3 D '62. (MIRA 16:2)

1. Ministerstvo avtomobil'nogo transporta i shosseynykh dorog RSFSR.

(Road Construction)

TOLSTOY, I.I.

Main requirements for a success. Avt.dor. 25 no.5:2-4 My '62.
(MIRA 15:6)

1. Nachal'nik Upravleniye kadrov i uchebnykh zavedeniy Ministerstva avtomobil'nogo transporta i shosseynykh dorog. RSFSR.

(Road construction--Study and teaching)

TOLSTOY, K. P.

How the workers of the Lutugin Mine achieved success. Bezop. truda v prom. 5 no.11:3-5 N '61. (MIRA 14:11)

1. Nachal'nik Chistyakovskoy rayonnoy gornotekhnicheskoy inspektsii Upravleniya Stalinskogo okruga Gosgortekhnadzora USSR.

(Donetsk Province—Coal mines and mining—Safety measures)

TOLSTOY, K. P., inzh.

All workers' duty. Bezop. truda v prom. 6 no.9:17-19 S '62.
(MIRA 16:4)

1. Nachal'nik Chistyakovskoy rayonnoy gornotekhnicheskoy inspektsii; Upravleniye Donetskogo okruga Gosudarstvennogo komiteta pri Sovete Ministrov UkrSSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

(Chistyakovo region—Coal mines and mining)

TOLSTOY, K.P., inzh.

Innovator A. Kol'chik's advanced measures increase working safety. Bezop. truda v prom. 2 no.8:36-37 Ag '58. (MIRA 12:7)

(Donets Basin--Coal mines and mining--Safety measures)

[illegible] : USSR
[illegible] : Soil Science. Fertilizers

ABS. JOUR.: Ref Zhur-Biologiya, No. 5, 1959, No. 20083

AUTHOR : Tolstoy, K.P.
INST. : --
TITLE : Experiment on the Use of Ammonia Water by Farms in Erkutskaya Oblast'

ORIG. PUB.: Zemledeliye, 1958, No.4, 34-39

ABSTRACT : According to experimental results gotten at the Irkutsk Experiment Station the yield of spring wheat on grey heavy Podzolic clay was increased (in terms of centners/ha) by the use of 25% ammonia water in doses of 50kg/ha of N up to 26.7 centners/ha, by the use of ammoniated peat - 25.0, of Na - 24.3, while the contral without fertilizer yielded 21.3 centners/ho. The yield of green corn bulk on sandy soils in non-fertilized fallow

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CATEGORY :

ABS. JOUR. : Ref Zhur -Biologiya, No. 5, 1959, No. 20083

AUTHOR :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT : land per dose of 100 kg/ha of N gave correspondingly up to 298, 292, and 265 against a control of 181 centners/ha. In the Kalinin Kolkhoz of the Kirovskiy Rayon the yield of green corn roughage on plots fertilized with ammonia water doses of 300 liters per ha was increased by 126 centners/ha. Similar yield increases were obtained in other Kolkhozes. Ammoniated peat can be stock-piled in the open air without loss of N. It does not freeze even at -45°. All

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